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are now necessary. This construction will also be attended with the advantage of requiring a much smaller thickness in the plate-glass, and will thus facilitate the selection of proper pieces of glass for being worked into an object lens.

From all these considerations, the author entertains the confident expectation of being able, with proper assistance, to construct a telescope of two feet aperture and 24 feet in length, which would as much exceed the most powerful telescopes of the present day, as these exceed the refractors which existed at the close of the last century.

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December 16.

His Royal Highness the Duke of SUSSEX, President, in the Chair.

The following Presents were received, and thanks ordered for them:—

Illustrations of Mr. S. Cooper's Surgical Dictionary. Published Monthly. Each Part containing four Lithographic Plates, with Letter-press descriptions, and references to the Text. Parts 1-3. 8vo.—*Presented by the Author.*

Occultations of Fixed Stars by the Moon in November and December. 1830. Computed for Greenwich, by Thomas Henderson, Esq.—*The Astronomical Society.*

The Geographical System of Herodotus examined and explained, by a comparison with those of other ancient Authors, and with modern Geography. With Dissertations on the Itinerary Stade of the Greeks, the Expedition of Darius Hystaspes, the position and remains of ancient Babylon, the alluvions of the Nile, and Canals of Suez; the Oasis and Temple of Jupiter Ammon, the ancient circumnavigation of Africa, and other subjects of History and Geography. 2nd Edition, revised. By James Rennell, Esq. F.R.S. 8vo.—*Mrs. Rodd.*

Elements of the Economy of Nature, or the Principles of Physics, Chemistry, and Physiology; founded on the recently discovered Phenomena of Light, Electro-Magnetism, and Atomic Chemistry. By J. G. Macvicar, M.A. 8vo.—*The Author.*

Illustrations of the atmospheric Origin of Epidemic Diseases. 2nd Edition. By T. Forster, M.B. 8vo.—*The Author.*

Observations on the Union which has become necessary between the hitherto separated branches of the Medical Profession, and on the Foundation of a Faculty of Medicine. By T. Forster, M.B. 8vo.—*The Author.*

On the Glanders in the Human Subject. By John Elliotson, M.D. F.R.S. 8vo.—*The Author.*

Science without a Head; or the Royal Society dissected. By one of the 687 F.R.S. sss. 8vo.—*The Author.*

Berliner Astronomisches Jahrbuch für 1832. Mit Genehmigung der Königlichen Academie der Wissenschaften, herausgegeben von J. F. Encke, Konigl. Astronom. 8vo.—*Professor Encke, For. Mem. R.S.*

Verzeichniss der von Bradley, Piazzi, Lalande und Bessel beobachteten Sterne, in dem Theile des Himmels zwischen  $14^{\text{h}} 56^{\text{m}}$  bis  $16^{\text{h}} 4'$  gerader Aufsteigung, und  $15^{\circ}$  südlicher bis  $15^{\circ}$  nördlicher Abweichung, berechnet und auf 1800 reducirt von Herrn Professor Harding in Göttingen.—Auf Veranlassung der Königl. Akademie der Wissenschaften in Berlin.—Akademische Sternkarten : Zone xv uhr, Blatt 16. folio.—*Professor Harding, For. Mem. R.S.*

Chart illustrative of the preceding Work.—*The Same.*

Traité Élémentaire de Matière Médicale. Troisième Edition, revue, corrigée, et augmentée. Par J. B. G. Barbier, D.M. 8vo.—*The Author.*

Aperçu du Commerce Français avec tous les Pays du Monde. Par César Moreau, F.R.S.—*The Author.*

Eloge Historique de M. le Marquis De la Place, prononcé dans la Séance publique de l'Académie Royale des Sciences, le 15 Juin 1829 ; par M. le Baron Fourier. 4to—*The Academy.*

A Paper was read, entitled, "Researches in Physical Astronomy;" by John William Lubbock, Esq. V.P. and Treasurer of the Royal Society.

The author has shown in a former paper, published in the last part of the Philosophical Transactions for 1830, that the stability of a system of bodies subject to the law of gravitation, is always preserved, provided they move in a space absolutely devoid of resistance. This conclusion results from the analytical expressions for the variations of the elliptic constants in the theory of the Planetary Motions.

In the present paper he extends his researches to the problem of the precession of the Equinoxes, which admits of a similar solution to the former. Of the six constants which determine the position of the revolving body, and the axis of instantaneous rotation, at any instant, three have only periodic inequalities ; while the other three have each a term which varies as the time ; but from the manner in which these constants enter into the resulting expressions, the equilibrium of the system may be inferred to be stable, as in the former case. By the stability of the system, the author wishes to be understood to mean that the pole of the axis of rotation has always nearly the same geographical latitude, and that the angular velocity of rotation, and the obliquity of the ecliptic vary within small limits ; and that its variation is periodical.

The author also gives new methods of obtaining the inequalities of longitude, and the radius vector, in the planetary theory, retaining the square of the eccentricities. When only the first powers of the eccentricities are retained, these expressions admit of simplification. He subjoins as a numerical example, the calculation of the coefficients of two of the inequalities of longitude in the theory of Jupiter disturbed by Saturn ; and points out the requisite substitutions for rendering the formulæ applicable to the case of a superior planet disturbed by an inferior planet.